Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-7 (canceled)

8.   (currently amended):   ~~The method of claim 7~~ A method of setting the drive and sense frequencies of a gyroscope having a drive mass and a sense mass coupled together by a flexure assembly comprising:

selecting a drive stiffness, K_d;

selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d;

selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s; and

determining whether said gyroscope has obtained desired performance and size envelope characteristics;

where said flexure assembly includes at least one pair of flexures, and where selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, comprises selecting an angle which said pair of flexures makes to each other; and

where said flexure assembly comprises two diametrically opposing pairs of flexures and where selecting an angle which said pair of flexures makes to each other

comprises setting a dihedral angle between each of said flexures of said two diametrically opposing pairs.

9.   (currently amended): ~~The method of claim 1~~ A method of setting the drive and sense frequencies of a gyroscope having a drive mass and a sense mass coupled together by a flexure assembly comprising:

selecting a drive stiffness, K_d;

selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d;

selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s; and

determining whether said gyroscope has obtained desired performance and size envelope characteristics;

where selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d, comprises selecting length, L, and width, w, of four flexures formed into two pairs comprising said flexure assembly, where

$$\omega_d^2 = \frac{4 E w^3 t R^2}{12 L^3 I_d}$$

where E is the Young's modulus of said flexure, t is the process thickness of said flexure, I_d is the rotational moment of inertia of said drive mass about a rate axis, and R is the radius of said drive mass, where said drive mass is a ring-shaped mass.

10.   (currently amended): ~~The method of claim 1~~ A method of setting the drive and sense frequencies of a gyroscope having a drive mass and a sense mass coupled together by a flexure assembly comprising:

selecting a drive stiffness, K_d;

selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d;

selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s; and

determining whether said gyroscope has obtained desired performance and size envelope characteristics;

where selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, comprises selecting θ in

$$\omega_s^2 = \frac{4\,E\,w\,t^3 \sin\theta\,R^2}{12\,L^3\,I_s}$$

where E is the Young's modulus of said flexure, t is the process thickness of said flexure, I_s is the rotational moment of inertia of said sense mass about a sense axis, R is the radius of said drive mass, where said drive mass is a ring-shaped mass, L is the length of each flexure within said flexure assembly, and w is the width of each flexure within said flexure assembly which is comprised of four flexures formed into two pairs.

11. (original): The method of claim 9 where selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, comprises selecting θ in

$$\omega_s^2 = \frac{4 E w t^3 \sin\theta \, R^2}{12 L^3 I_s}.$$

Claims 12 – 17 (canceled)

18. (currently amended): ~~The improvement of claim 17~~ An improvement in a gyroscope comprising:

a drive mass;

a sense mass; and

a flexure assembly coupling said drive and sense mass together;

where said drive mass has a selecting drive stiffness, K_d obtained by selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d; and where said sense mass as a sense stiffness K_s obtained by selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, and where said gyroscope has obtained desired performance and size envelope characteristics by independent selection of said geometric and configurational parameters of said flexure assembly;

where said flexure assembly includes at least one pair of flexures, and where said configurational parameter of said flexure assembly selected to obtain a desired sense frequency, ω_s, comprises a selected angle which said pair of flexures makes to each other; and

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where said flexure assembly comprises two diametrically opposing pairs of flexures and where said angle which said pair of flexures makes to each other comprises a selected dihedral angle between each of said flexures of said two diametrically opposing pairs.

19. (currently amended): ~~The improvement of claim 12~~ An improvement in a gyroscope comprising:

a drive mass;

a sense mass; and

a flexure assembly coupling said drive and sense mass together;

where said drive mass has a selecting drive stiffness, K_d obtained by selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d; and where said sense mass as a sense stiffness K_s obtained by selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, and where said gyroscope has obtained desired performance and size envelope characteristics by independent selection of said geometric and configurational parameters of said flexure assembly; and

where said geometric parameters of said flexure assembly selected to obtain a desired drive frequency, ω_d, comprises a length, L, and width, w, of four flexures formed into two pairs comprising said flexure assembly, where

$$\omega_d^2 = \frac{4\,E\,w^3\,t\,R^2}{12\,L^3\,I_d}$$

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where E is the Young's modulus of said flexure, t is the process thickness of said flexure, I_d is the rotational moment of inertia of said drive mass about a rate axis, and R is the radius of said drive mass, where said drive mass is a ring-shaped mass.

20.   (currently amended): ~~The improvement of claim 12~~ An improvement in a gyroscope comprising:

a drive mass;

a sense mass; and

a flexure assembly coupling said drive and sense mass together;

where said drive mass has a selecting drive stiffness, K_d obtained by selecting geometric parameters of said flexure assembly to obtain a desired drive frequency, ω_d; and where said sense mass as a sense stiffness K_s obtained by selecting a configurational parameter of said flexure assembly to obtain a desired sense frequency, ω_s, and where said gyroscope has obtained desired performance and size envelope characteristics by independent selection of said geometric and configurational parameters of said flexure assembly; and

where said configurational parameter of said flexure assembly selected to obtain a desired sense frequency, ω_s, comprises a selected θ in

$$\omega_s^2 = \frac{4\,E\,wt^3 \sin\theta\,R^2}{12\,L^3\,I_s}$$

where E is the Young's modulus of said flexure, t is the process thickness of said flexure, I_s is the rotational moment of inertia of said sense mass about a sense axis, R is the radius of said drive mass, where said drive mass is a ring-shaped mass, L is the

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length of each flexure within said flexure assembly, and w is the width of each flexure within said flexure assembly which is comprised of four flexures formed into two pairs.

21. (original): The improvement of claim 19 where said configurational parameter of said flexure assembly selected to obtain a desired sense frequency, ω_s, comprises a selected θ in

$$\omega_s^2 = \frac{4\,E\,w\,t^3\,\sin\theta\,R^2}{12\,L^3\,I_s}.$$